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ABSTRACT

A comparison of the results of grades 4, 7, and 10 of the Dearborn Public Schools and the state attainment on the Michigan Educational Assessment Program (MEAP) by skill areas and objectives is described. The contents include (1) Dearborn versus state MEAP attainment results, (2) comparison of MEAP results with previous MEAP results of same groups of students, (3) comparison of skill area attainment, (4) analysis of 4th grade MEAP results by objectives, (5) analysis of 7th grade MEAP results by objectives, (6) analysis of 10th grade MEAP results by objectives, and (7) test item analysis. State 1981-82 MEAP test item analyses for grades 4, 7, and 10 in mathematics and reading are presented in the appendix. (PN)

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COMPARISON OF DEARBORN AND STATE ATTAINMENT ON THE 1980-81 AND 1981-82 MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM BY SKILL AREAS AND OBJECTIVES GRADES 4, 7 AND 10

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Office of Research and Evaluation

Public Schools

Dearborn, Michigan

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APPENDIX

State 1981-82 MEAP Test Item Analysis

- Grade 4 Reading
- Grade 4 Mathematics
- Grade 7 Reading
- Grade 7 Mathematics
- Grade 10 Reading
- Grade 10 Mathematics

Note: The Dearborn 1981-82 MEAP Test Item Analysis Results can be found in the following Bulletins:

Bulletin No. 1196, "Summary of Dearborn's Results 1981-82 Michigan Educational Assessment Program, Grade 4" (January 6, 1982)

Bulletin No. 1197, "Summary of Dearborn's Results 1981-82 Michigan Educational Assessment Program, Grades 7 and 10" (January 7, 1982)

COMPARISON OF DEARBORNS'S AND THE STATE 1980 AND 1981 MEAP
RESULTS BY SKILL AREAS AND OBJECTIVES

DEARBORN VERSUS STATE MEAP ATTAINMENT RESULTS

Dearborn's grade four, seven and ten student attainment on the 1981 MEAP's is encouraging with the exception of grades four and ten reading. Dearborn's 1981 relative status when compared to the State is about the same as 1980's.

The percent of students attaining the "acceptable mastery level" since 1977 is as follows:

GRADE FOUR READING

Year	Dearborn	State	Gain
1977-78	59.9	60.5	-0.6
1978-79	57.9	62.4	-4.5
1979-80	68.8	65.5	+3.3
1980-81	72.1	70.7	+1.4
1981-82	72.5	72.9	-0.4

GRADE FOUR MATHEMATICS

Year	Dearborn	State	Gain
1977-78	76.7	76.8	+0.1
1978-79	77.5	79.1	-1.6
1979-80	86.5	82.8	+3.7
1980-81	75.6	72.3	+3.3
1981-82	77.8	74.2	+3.6

GRADE SEVEN READING

Year	Dearborn	State	Gain
1977-78	70.6	65.7	+4.9
1978-79	67.6	67.3	+0.3
1979-80	72.5	69.3	+3.2
1980-81	75.9	76.7	-0.8
1981-82	81.0	77.9	+3.1

GRADE SEVEN MATHEMATICS

Year	Dearborn	State	Gain
1977-78	55.7	46.6	+9.1
1978-79	53.9	49.7	+4.7
1979-80	62.0	52.2	+9.8
1980-81	62.2	58.7	+3.5
1981-82	66.4	59.4	+7.0

GRADE TEN READING*

Year	Dearborn	State	Gain
1977-78	52.5	55.4	-2.9
1978-79	60.5	61.0	-0.5
1979-80	67.6	61.0	+6.6
1980-81	78.1	73.3	+4.8
1981-82	77.5	76.3	+1.2

GRADE TEN MATHEMATICS*

Year	Dearborn	State	Gain
1977-78	51.0	43.9	+7.1
1978-79	59.2	51.0	+8.2
1979-80	65.4	49.8	+15.6
1980-81	70.0	57.7	+12.3
1981-82	68.2	58.5	+9.7

COMPARISON OF MEAP RESULTS WITH PREVIOUS MEAP RESULTS OF SAME GROUPS OF STUDENTS

While it is inappropriate to compare grade 4, 7 and 10 MEAP test results directly, one can make comparisons in relation to the State average attainment.

It is estimated that from 75 to 80 percent of student enrollment at a specific grade level is still enrolled in a Dearborn school three years hence.

Grade 7 (1981-82) Students

	Dearborn	State	Gain
Grade 7 Reading	81.0	77.9	+3.1
Grade 7 Math	66.4	59.4	+7.0

As grade 4 (1978-79 Students)

	Dearborn	State	Gain
Grade 4 Reading	57.9	62.4	-4.5
Grade 4 Math	77.5	79.1	-1.6

This is excellent improvement relative to the State averages. This provides objective evidence that instructional changes have occurred over the past three years in grades four through six.

*During 1977-78 and 1978-79 the grade ten MEAP was administered only to students at Fordson High School and a statewide sample of students.

Grade 10 (1981-82) Students

	Dearborn	State	Gain
Grade 10 Reading	77.5	76.3	+1.2
Grade 10 Math	68.2	58.5	+9.7

As grade 7 (1978-79) Students

	Dearborn	State	Gain
Grade 7 Reading	67.5	67.3	+0.3
Grade 7 Math	53.9	49.7	+4.7

As grade 4 (1975-76) Students

	Dearborn	State	Gain
Grade 4 Reading	55.8	51.4	+4.4
Grade 4 Math	83.3	77.2	+6.1

The above comparison indicates that the reading and mathematics skills of Dearborn grade ten students remained relatively stable in relationship to the State average attainment.

COMPARISON OF SKILL AREA ATTAINMENT

The 1980-81 MEAP tests were changed by increasing the number of and the emphasis on the reading and mathematics objectives. The 1981-82 MEAP tests are the same as the 1980-81 MEAP tests. Three test items measure each objective rather than four or five items. Consequently, student mastery of an objective was changed to two out of three. These changes in the MEAP test make it inappropriate to compare attainment of objectives of previous MEAP's.

However, comparison of MEAP skill areas and objectives can be made between Dearborn and the State.

Dearborn's Reading skill areas of Vocabulary Meaning, Literal Comprehension, and Inferential Comprehension at the fourth grade as well as Critical Reading Skills at the tenth grade are below the State attainment level. At the seventh grade level, however, the area of Vocabulary Meaning is the strongest reading skill for Dearborn students.

The only mathematics skill area below the State attainment is Geometry at the tenth grade. Dearborn student attainment in Fractions is a strength at the tenth grade.

COMPARISON OF ATTAINMENT ON MEAP RESULTS BY SKILL AREAS

GRADE FOUR READING

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
I Vocabulary Meaning (6)	83	83	+0	83	84	-1
II Literal Comprehension (5)	84	85	-1	85	86	-1
III Inferential Comprehension (9)	78	78	+0	78	80	-2
IV Critical Reading Skills (1)	66	65	+1	69	68	+1
V Related Study Skills (4)	73	72	+1	73	73	+0

GRADE FOUR MATHEMATICS

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
1. Numeration (9)	85	82	+3	86	83	+3
2. Whole Numbers (12)	82	79	+3	84	81	+3
3. Fractions (2)	83	82	+1	82	79	+3
4. Metric Measurement (2)	88	86	+2	82	81	+1
5. Non-Metric Measurement (1)	98	97	+1	98	98	+0
6. Geometry (2)	92	91	+1	92	91	+1
Correlated Objectives Form D (5) 1980-81	84	81	+3			
Correlated Objectives Form A (5) 1981-82				82	80	+2

GRADE SEVEN READING

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
I Vocabulary Meaning (5)	83	83	+0	87	84	+3
II Literal Comprehension (5)	84	84	+0	85	84	+1
III Inferential Comprehension (7)	78	79	-1	82	80	+2
IV Critical Reading Skills (2)	75	76	-1	78	78	+0
V Related Study Skills (4)	89	89	+0	90	89	+1

GRADE SEVEN MATHEMATICS

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
1. Numeration (2)	88	89	-1	92	89	+3
2. Whole Numbers (8)	85	84	+1	87	84	+3
3. Decimals (3)	72	69	+3	77	72	+5
4. Fractions (6)	74	70	+4	74	70	+4
5. Metric Measurement (4)	66	65	+1	65	64	+1
6. Non-Metric Measurement (2)	74	72	+2	77	76	+1
7. Geometry (2)	90	89	+1	86	86	+0
8. Probability & Statistics (1)	85	83	+2	87	84	+3
Correlated Objectives Form D (6) 1980-81	75	73	+2			
Correlated Objectives Form A (6) 1981-82				77	75	+2

GRADE TEN READING

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
I Vocabulary Meaning (5)	88	85	+3	88	87	+1
II Literal Comprehension (5)	83	82	+1	84	83	+1
III Inferential Comprehension (8)	82	79	+3	82	81	+1
IV Critical Reading Skills (3)	81	78	+3	80	81	-1
V Related Study Skills (3)	87	85	+2	85	85	+0

GRADE TEN MATHEMATICS

Skills (Number of Objectives)	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
1. Whole Numbers (2)	92	89	+3	92	88	+4
2. Decimals (6)	82	79	+4	81	77	+4
3. Fractions (8)	78	70	+8	78	71	+7
4. Ratio, Proportion & Percent (2)	85	79	+6	78	73	+5
5. Metric Measurement (2)	70	65	+5	69	67	+2
6. Non-Metric Measurement (3)	82	77	+5	83	78	+5
7. Geometry (1)	72	69	+3	69	70	-1
8. Probability & Statistics (2)	86	81	+5	83	79	+4
9. Equations, Expressions, Graphs (2)	89	88	+1	90	88	+2
Correlated Objectives Form D (7) 1980-81	74	69	+5			
Correlated Objectives Form A (7) 1981-82				81	76	+5

SUMMARY OF RELATIVE MEAP OBJECTIVE STRENGTHS AND WEAKNESSES

The MEAP Reading Skill Areas and the Mathematic Skill Areas are subdivided into objectives.

Relative strengths and weaknesses of the objective are analyzed by the following classifications at the District level of comparison:

Strength: objectives attained by ninety percent or more of Dearborn students

Strength: objectives attained of five or more percentage points above the State attainment level

Weakness: objectives attained by less than seventy percent of Dearborn students

Weakness: objectives attainment of two or more percentage points below the State attainment level

The number of objectives that fit these categories are summarized below. Collectively there is little difference between the achievement level of the MEAP objectives for the students tested in 1980-81 and 1981-82.

Strength: Ninety Percent Mastery or Greater

	1980-81	1981-82
Grade 4 Reading	1	1
Grade 7 Reading	4	5
Grade 10 Reading	4	4
Grade 4 Math	7	8
Grade 7 Math	4	5
Grade 10 Math	7	5
Subtotal	27	28

Weakness: Less than Seventy Percent Mastery

	1980-81	1981-82
Grade 4 Reading	2	2
Grade 7 Reading	-	-
Grade 10 Reading	-	-
Grade 4 Math	2	1
Grade 7 Math	3	5
Grade 10 Math	3	6
Subtotal	10	13

Strength: Five or More Percent Above State

	1980-81	1981-82
Grade 4 Reading	-	-
Grade 7 Reading	-	1
Grade 10 Reading	4	1
Grade 4 Math	5	2
Grade 7 Math	3	6
Grade 10 Math	14	12
Subtotal	26	22

Weakness: Two or More Percent below State

	1980-81	1981-82
Grade 4 Reading	5	7
Grade 7 Reading	9	-
Grade 10 Reading	-	3
Grade 4 Math	-	1
Grade 7 Math	2	-
Grade 10 Math	1	-
Subtotal	15	11

For comparison purposes both the 1980-81 and 1981-82 MEAP objective results are reported when either year's scores fits one of the above classifications.

ANALYSIS OF FOURTH GRADE MEAP RESULTS BY OBJECTIVES

GRADE 4 READING (25 Objectives)

Strength: Objective attained by 90% of Dearborn students:

Objective Code	Objective	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
II F	Cause/Effect	90	90	+0	90	91	-1
Weakness:	Objectives that were not attained by 70% of Dearborn students:						
VF	Alphabetizing	60	58	+2	59	58	+1
IV A	Author's Purpose	66	65	+1	69	68	+1
Weakness:	Objectives on which Dearborn students attained two or more percentage points below the State average attainment:						
II B	Main Idea	84	86	-2	85	87	-2
III B	Cause/Effect	78	80	-2	81	82	-1
III E	Sequence	71	73	-2	73	75	-2
I D	Synonyms	88	88	+0	87	89	-2
II D	Main Idea Details	86	86	+0	86	88	-2
II G	Likeness/Difference	86	87	-1	85	88	-3
III G	Probable Outcome	77	77	+0	76	80	-4
III H	Analogies	78	75	+3	73	77	-3

GRADE 4 MATHEMATICS (28 Objectives)

Strength: Objectives attained by 90% of Dearborn students:

Objective Code	Objective	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
147-6	Time: Nearest Hour	98	97	+1	98	98	+0
79-4/6	Identify Congruent Parts	95	92	+3	94	94	+0
23-3	AB + CD, No Regrouping	95	92	+3	95	93	+2
163-1	Properties of Figures	93	92	+1	93	93	+0
36-1	A x 1 = ?	92	87	+5	88	88	+0
143-2	Temperature	92	88	+4	92	88	+4
156-1	Shapes	90	89	+1	92	90	+2
10-5	Order Sets: Fewer	87	86	+1	90	88	+2
16-9	ABC > CBA OR ABC < CBA	89	87	+2	92	90	+2
Strength:	Objectives on which Dearborn students attained five or more percentage points above the State average attainment:						
35-3	A + A + A... = A x B	65	58	+7	76	74	+2
24-1	AB + C, with Regrouping	85	79	+6	87	80	+7
31-1	AB - C, with Regrouping	74	69	+5	74	70	+4
36-1	A x 1 = ?	92	87	+5	88	88	+0
16-7	Expand 3-Digit Numeral W/Words	88	83	+5	88	84	+4

GRADE 4 MATHEMATICS (28 Objectives) - Continued

Weakness: Objectives that were not attained by 70% of Dearborn students.

Objective Code	Objective	1980-81 Dearborn	State	Gain	1981-82 Dearborn	State	Gain
35-3	A + A + A... = A x B	65	58	+7	76	74	+2
35-6	A x B = A + A + A...	67	63	+4	70	64	+6
79-13	Shaded Regions: 1/2, 1/3, 1/4	71	71	+0	69	65	+4
Weakness:	Objectives on which Dearborn students attained two or more percentage points below the State average attainment:						
23-1	AB + C, No Regrouping	86	86	+0	83	85	-2

ANALYSIS OF SEVENTH GRADE MEAP RESULTS BY OBJECTIVES

GRADE 7 READING (23 Objectives)

Strength: Objectives on which Dearborn students attained five or more percentage points above the State average attainment:

Objective Code	Objective	1980-81 Dearborn	State	Gain	1981-82 Dearborn	State	Gain
IA	Prefixes	77	76	+1	83	78	+5
Strength:	Objectives attained by 90% of Dearborn students:						
VB	References, Use	96	95	+1	95	94	+1
VA	References, Awareness	95	93	+2	93	92	+1
IF	Context	92	92	+0	94	93	+1
IC	Multiple Meanings	90	92	-2	94	93	+1
IIIC	Probable Outcome	87	89	-2	91	90	+1
Weakness:	Objectives that were not attained by 70% of Dearborn students:						
IIIE	Sequence	67	69	-2	70	69	+1
IVA	Author's Purpose	69	69	+0	71	71	+0
Weakness:	Objectives on which Dearborn students attained two or more percentage points below the State average attainment:						
IIIB	Cause/Effect	80	84	-4	86	86	+0
IIID	Main Idea Details	73	77	-4	83	82	+1
IIIC	Probable Outcome	87	89	-2	91	90	+1
IIIE	Sequence	67	69	-2	70	69	+1
IIIG	Conclusions	78	80	-2	80	78	+2
IC	Multiple Meanings	90	92	-2	94	93	+1
IIE	Sequence	79	81	-2	82	82	+0
IIG	Likeness/Difference	84	86	-2	84	83	+1
IVC	Author's Viewpoint	80	82	-2	86	85	+1

GRADE 7 MATHEMATICS (28 Objectives)

Strength: Objectives that were attained by 90% or more of Dearborn students:

Objective Code	Objective	1980-81 Dearborn	State	Gain	1981-82 Dearborn	State	Gain
19-2	Write Four-Digit Numeral	94	98	-4	99	97	+2
25-3	A + B + C: Addend <7 Digits	93	91	+2	93	92	+1
157-1	Quadrilaterals	92	92	+0	92	93	-1
39-1	AB x C = ?	91	90	+1	93	90	+3
144-1	Temperature	87	86	+1	90	88	+2
Strength:	Objectives on which Dearborn students attained five or more percentage points above the State average attainment:						
90-3	Whole Number Minus Fraction	64	56	+8	56	49	+7
94-2	Whole Number Times Fraction	67	61	+6	68	63	+5
63-2	Place Value	53	47	+6	60	50	+10
45-1	Division: Word Problem	76	74	+2	80	74	+6
81-3	Equivalence	67	63	+4	75	66	+9
119-2	Area: Count Square Units	71	68	+3	73	68	+5
Weakness:	Objectives that less than 70% of Dearborn students mastered:						
63-2	Place Value	53	47	+6	60	50	+10
109-2/3	Conversion: Meters, Centimeters	53	49	+4	50	50	+0
127-1	Volume: Count Cubic Units	53	55	-2	49	48	+1
90-3	Whole Number Minus Fraction	64	56	+8	56	49	+7
94-2	Whole Number Times Fraction	67	61	+6	68	63	+5
Weakness:	Objectives on which Dearborn students attained two or more percentage points below the State average attainment:						
19-2	Write Four-Digit Numeral	94	98	-4	99	97	+2
127-1	Volume: Count Cubic Units	53	55	-2	49	48	+1

ANALYSIS OF TENTH GRADE MEAP RESULTS BY OBJECTIVES

GRADE 10 READING (24 OBJECTIVES)

Strength: Objectives that were attained by 90% or more of Dearborn students:

Objective Code	Objective	1980-81 Dearborn	State	Gain	1981-82 Dearborn	State	Gain
IF	Context	96	95	+1	95	96	-1
VB	References, Use	94	94	+0	96	97	-1
IE	Antonyms	92	90	+2	94	91	+3
IC	Multiple Meanings	91	90	+1	92	91	+1

GRADE 10 READING (24 Objectives) - Continued

Strength: Objectives on which Dearborn students attained five or more percentage points above the State average attainment:

Objective Code	Objective	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
IIIH	Analogies	77	70	+7	76	73	+3
IA	Prefixes	76	70	+6	76	72	+4
IIIA	Main Idea	84	79	+5	85	82	+3
VA	References, Awareness	86	81	+5	83	79	+4

Weakness: Objectives on which Dearborn students attained two or more percentage points below the State average attainment:

IIE	Sequence	83	82	+1	80	83	-3
IVC	Author's Viewpoint	85	82	+3	81	83	-2
VD	Summarizing	81	80	+1	78	80	-2

GRADE 10 MATHEMATICS (28 Objectives)

Strength: Objectives that were attained by 90% or more of Dearborn students:

Objective Code	Objective	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
182-5	Read Coordinate System	98	98	+0	99	98	+1
149-1	Time Conversion	94	90	+4	94	90	+4
66-2	Convert Fractions to Decimals	92	85	+7	86	81	+5
46-5	Division: Computation	92	89	+3	93	89	+4
47-2	Division: Word Problems	91	88	+3	92	88	+4
82-2	Meaning of Fractions	90	82	+8	88	82	+6
97-2	A/B x C/D; B,C < 10	90	89	+1	92	90	+2

Strength: Objectives on which Dearborn students attained five or more percentage points above the State average attainment:

87-3	A/B + C/D, B ≠ D	71	59	+12	69	61	+8
88-2	Addition: Word Problems	72	61	+11	69	62	+7
92-6	Addition: Mixed Numbers	75	65	+10	75	67	+8
97-5	Whole Number x Mixed Number	53	43	+10	54	43	+11
92-4	A/B - C/D, B ≠ D	86	77	+9	85	78	+7
82-2	Meaning of Fractions	90	82	+8	88	82	+6
83-3	Convert Mixed to Common	88	81	+7	89	83	+6
146-1	Angle Measurement	76	68	+8	77	69	+8
66-2	Convert Fractions to Decimals	92	85	+7	86	81	+5
75-3	Multiplication: Word Problems	88	83	+5	88	84	+4
173-1	Mean of a Set of Numbers	87	81	+6	85	80	+5
105-4	Convert Fraction, Decimal, %	88	82	+6	85	77	+8
106-1	Percent: Word Problems	81	75	+6	72	68	+4
130-1	Volume: Computation	82	76	+6	80	77	+3
67-1	Order Set of Decimals	86	83	+3	78	73	+5

GRADE 10 MATHEMATICS (28 Objectives) - Continues

Weakness: Objectives that less than 70% of the Dearborn students mastered:

Objective Code	Objective	1980-81 Dearborn	1980-81 State	1980-81 Gain	1981-82 Dearborn	1981-82 State	1981-82 Gain
97-5	Whole Number x Mixed Number	53	43	+10	54	43	+11
77-3	Decimal ÷ Decimal	57	55	+2	65	66	-1
124-2	Area: Word Problems	58	54	+4	58	57	+1
87-3	A/B + c/D, B ≠ D	71	59	+12	69	61	+8
88-2	Addition: Word Problems	72	61	+11	69	62	+7
167-2	Parts of a Circle	72	69	+3	69	70	-1

TEST ITEM ANALYSIS

Another method of analyzing the MEAP results can be had with the Test Item Analysis reports. The use of the Test Item Analysis can be very helpful to help identify specific problems students have. When a large percent of students choose an incorrect answer, it generally means that it is an area of learning that needs special attention.

The Test Item Analysis report is available at the classrrom, school, district and State levels.

On the 1981-82 State MEAP Test Item Analysis Reports in the appendix, objectives which have been mastered by less than seventy-five percent of the students have been identified. Furthermore, individual test items (enclosed in a box) mastered by less than seventy percent of the students as well as those incorrect item responses (circled) chosen by twenty perdent of the students are identified as problem areas.

Similar test item analysis should be completed by individual schools.

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Reading Grade 4

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	[illegible]	[illegible]	[illegible]	[illegible]		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
VOCABULARY MEANING																						
IA	4	10	17	69	1	3	8	.84	4	0	2	4	.83	7	6	0	3	5	.84	6	4	0
IB	5	11	26	53	19	10	7	4	.79	1	20	5	.83	7	6	0	21	4	13	8	.75	0
IC	4	9	19	68	51	4	5	5	.86	0	52	2	4	.83	10	0	53	6	6	.83	6	0
ID	4	7	14	75	4	5	5	.87	3	0	5	4	.90	4	2	0	6	4	7	.84	5	0
IE	13	12	21	54	33	28	4	4	.64	0	37	.73	13	3	10	0	38	4	.79	5	12	0
IF	8	11	19	62	56	9	.79	7	4	0	67	6	7	.77	10	0	68	5	6	9	.79	0
LITERAL COMPREHENSION																						
IIB	4	10	22	65	7	6	5	.85	5	0	25	.86	5	3	4	1	47	6	6	10	.78	0
IIC	3	9	19	69	14	4	3	.89	4	0	41	8	.84	4	4	0	63	4	10	.80	5	0
IIE	6	18	29	49	17	12	.80	3	5	0	29	7	.70	11	12	0	45	10	5	12	.73	1
IIF	2	7	22	69	10	.93	3	2	2	1	31	8	.84	5	2	0	59	7	8	.82	3	0
IIG	3	9	23	65	9	.92	3	3	2	0	27	.79	9	3	9	0	49	.78	6	6	9	0
INFERENTIAL COMPREHENSION																						
IIIA	6	16	31	47	13	4	.78	8	9	0	40	8	.73	6	13	1	62	6	18	.68	7	0
IIIB	5	13	26	56	16	.84	4	4	8	0	28	11	8	10	.70	0	44	.79	9	7	5	0
IIIC	6	14	22	58	39	5	.81	6	7	0	73	9	8	.75	8	0	75	9	7	8	.76	1
IIID	3	15	26	55	8	.92	2	2	3	0	26	16	.71	9	4	0	48	.71	12	7	9	0
IIIE	7	18	31	44	11	12	8	5	.75	0	32	.71	12	8	9	0	60	9	.66	14	11	0
IIIF	7	14	28	51	42	13	6	.69	12	0	57	.79	8	[illegible]	6	0	64	7	11	6	.76	1
IIIG	6	15	27	52	12	9	.82	5	5	0	33	11	7	5	.77	0	61	10	12	12	.66	0
IIIH	6	17	29	47	69	8	15	.70	7	0	70	13	[illegible]	.74	7	1	71	.74	6	14	5	0
IIII	5	11	22	62	15	6	4	8	.82	0	43	7	4	.80	8	0	65	.79	5	4	11	1
CRITICAL READING SKILLS																						
IVA	11	21	31	37	58	5	.56	32	6	0	72	5	.72	10	13	0	74	9	.67	9	14	0
RELATED STUDY SKILLS																						
VA	8	18	29	45	22	9	.64	18	8	0	23	8	11	13	.68	0	24	.78	5	11	6	1
VB	5	8	25	62	34	4	5	.87	3	0	35	4	.88	4	3	0	50	7	.69	16	6	1
VD	9	21	37	34	18	36	.51	7	6	0	30	10	9	.71	10	0	46	7	9	.74	10	0
VF	18	24	28	31	54	11	13	.57	19	0	55	16	.53	10	14	1	56	14	.56	21	9	0
POSITIVE RESPONSE/READING																						
VIA	22	44	26	8	76	29	25	.44	1	0	77	27	27	.45	1	0	78	44	25	.30	1	1
VIB	51	32	14	3	79	60	20	.19	2	1	80	56	19	.22	2	1	81	44	26	.28	1	0
VIC	53	32	12	3	82	58	21	.19	1	0	83	54	24	.20	1	1	84	43	27	.27	2	1
VID	46	33	17	4	85	60	21	.16	2	1	86	32	29	.37	2	0	87	41	29	.27	2	0
RELATED READING ACTIVITIES					88	48	32	12	8	0	89	29	27	18	26	0	90	46	29	13	12	0

≥25%

▭ < 70% CORRECT

⬭ ≥ 20% INCORRECT

Number of students included in this report: 120759

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Mathematics Grade 4

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	0 ITEMS CORRECT	1 ITEM CORRECT	2 ITEMS CORRECT	3 ITEMS CORRECT		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
NUMERATION																						
10-5	7	5	5	83	133	•87	10	2	1	0	134	9	•88	2	1	0	135	8	•89	2	1	0
10-7	9	4	5	82	169	7	•86	5	2	0	170	7	4	•87	2	1	171	•87	3	7	2	0
16-2	7	8	13	72	97	8	4	•81	7	0	98	•85	5	5	5	0	99	6	4	5	•85	1
16-4	10	12	18	60	151	17	6	•74	2	0	152	•79	8	10	3	0	153	16	•73	9	2	0
16-7	5	11	21	63	121	19	•73	5	3	0	122	6	•84	7	3	0	123	•84	5	10	2	0
16-8	16	11	12	61	163	•75	6	5	14	0	164	18	5	5	•72	0	165	17	6	•70	6	1
16-9	4	6	9	81	112	•89	8	2	1	0	113	9	•88	2	1	0	114	•89	7	3	1	0
16-10	8	10	16	66	109	9	6	•77	8	1	110	•82	6	7	5	1	111	10	6	•81	3	0
17-1	9	7	18	66	124	3	11	•84	2	0	125	11	12	•75	2	0	126	9	5	•82	3	0
WHOLE NUMBERS																						
23-1	4	11	12	73	154	12	•81	4	3	0	155	8	5	3	•83	1	156	5	•89	3	3	0
23-3	2	5	12	80	115	3	2	•90	4	1	116	2	4	•89	6	0	117	1	3	4	•92	0
24-1	10	10	10	69	118	3	•77	16	3	0	119	2	16	•79	3	0	120	3	11	•83	2	1
24-2	14	10	15	61	160	•75	9	5	9	0	161	9	13	•75	3	0	162	3	13	10	•73	0
29-2	12	5	8	75	100	16	•80	1	2	1	101	13	3	1	•83	0	102	1	2	13	•84	0
30-1	6	8	11	76	166	8	4	•85	3	0	167	•85	8	4	3	0	168	3	7	3	•86	0
30-2	5	8	14	74	148	3	5	•87	4	0	149	4	•82	7	6	0	150	3	6	•86	4	1
31-1	15	15	19	51	145	18	9	•65	7	1	146	•74	8	7	11	0	147	7	•67	18	8	0
35-3	9	17	16	58	130	•84	7	5	3	1	131	12	13	•69	6	0	132	15	7	•71	6	0
35-6	22	13	17	47	157	•61	23	10	5	0	158	23	10	•61	7	0	159	4	22	7	•67	0
36-1	6	6	12	76	139	3	2	•87	8	0	140	4	2	•86	7	1	141	7	2	•85	6	0
36-3	6	8	18	68	142	2	12	•82	4	0	143	2	9	6	•83	0	144	•82	7	8	2	0
FRACTIONS																						
79-4/6	2	5	16	78	136	3	•90	4	2	0	137	6	•87	5	1	0	138	1	3	•93	2	0
79-13	19	16	15	50	106	31	•62	4	4	0	107	•71	7	16	6	0	108	9	•64	20	7	0
METRIC MEASUREMENT																						
107-8	20	7	8	65	91	22	•75	2	1	0	92	1	3	•72	24	0	93	1	2	•71	25	0
143-2	2	10	13	75	103	2	8	•83	8	0	104	2	3	11	•84	0	105	•95	2	1	2	1
NON-METRIC MEASUREMENT																						
147-6	1	1	3	94	94	1	•97	1	1	0	95	•97	1	0	0	1	96	1	•97	1	0	0
GEOMETRY																						
156-1	3	7	14	76	127	3	2	4	•91	0	128	9	2	3	•84	0	129	•88	6	2	4	0
163-1	4	3	6	87	172	2	4	2	•91	0	173	2	•93	3	2	0	174	2	4	92	2	0
FORM A																						
7-2	9	6	6	80	187	•84	3	8	5	0	188	3	5	5	•86	0	189	2	•87	5	5	0
16-3	4	7	12	77	178	•88	9	2	1	0	179	8	•88	2	1	0	180	•87	8	2	2	1
29-4	11	8	17	64	181	•82	7	8	3	0	182	•80	8	8	4	0	183	6	14	6	•74	1
36-2	36	9	10	46	175	2	41	4	•51	1	176	4	•58	2	36	0	177	38	•56	2	3	0
156-3	4	7	15	74	184	2	4	5	•89	1	185	4	•85	5	4	1	186	9	4	•84	3	0

<--- ---> ≥ 25%

▭ < 70% CORRECT

◯ ≥ 20% INCORRECT

Number of students included in this report: 120679

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Reading Grade 7

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	ITEM	ITEM	3 ITEMS	3 ITEMS CORRECT		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
VOCABULARY MEANING																						
IA	7	15	29	49	4	•72	10	9	9	0	5	8	12	4	•75	0	6	15	7	•73	5	0
IC	1	6	19	74	7	•89	7	2	3	0	8	8	5	2	•84	0	9	1	1	•93	5	0
ID	6	15	30	50	29	2	15	•74	8	0	30	•85	9	3	3	1	31	6	[•65]	2	(26)	0
IE	11	11	13	65	56	4	5	•76	14	0	57	3	5	16	•76	0	58	5	•79	6	10	0
IF	2	6	16	77	10	2	2	•90	4	1	11	1	2	•90	7	0	12	8	2	•88	2	0
LITERAL COMPREHENSION																						
IIB	4	14	30	52	15	4	5	10	•80	1	44	12	4	•79	5	0	59	16	7	•70	6	0
IIC	2	9	25	64	21	•93	2	3	2	0	35	3	10	•82	5	0	37	•75	13	10	2	0
IIE	5	13	26	56	36	8	10	•75	6	0	62	6	10	6	•78	0	64	5	•79	8	8	0
IIF	3	10	27	60	38	6	•84	5	5	0	47	3	7	•85	5	0	68	7	12	•74	7	0
IIG	4	13	35	48	17	3	6	4	•87	0	46	(24)	[•57]	4	15	0	61	•82	6	6	6	0
INFERENTIAL COMPREHENSION																						
IIIA	[7]	[21]	35	36	18	•71	11	3	16	0	63	[•61]	10	9	(20)	0	65	8	8	14	[•69]	0
IIIB	3	11	33	54	22	15	[•69]	9	6	0	42	3	•91	5	2	0	71	13	•78	6	2	0
IIIC	3	7	21	68	32	3	3	3	•91	0	33	•79	14	4	2	0	34	4	•84	4	8	0
IIID	4	14	28	54	16	5	•76	6	14	0	45	3	•86	5	5	1	60	13	•71	7	8	1
IIIE	[7]	[24]	44	24	39	5	•75	15	5	0	48	[•69]	7	(20)	4	0	69	(35)	[•42]	16	6	1
IIIG	7	16	27	50	40	•72	5	15	8	0	49	10	7	•74	9	1	70	9	7	8	•76	1
IIIH	3	10	29	57	24	16	•76	6	2	0	25	4	9	4	•83	1	26	14	•82	2	2	0
CRITICAL READING SKILLS																						
IVA	[9]	[20]	30	41	13	13	3	[•66]	18	0	19	14	•76	7	2	0	66	13	14	12	[•61]	0
IVC	4	12	26	59	14	4	3	•87	4	0	20	10	6	5	•78	1	67	6	•75	14	6	0
RELATED STUDY SKILLS																						
VA	3	5	13	79	50	2	2	•89	4	2	51	2	5	7	•85	0	52	1	•94	2	2	0
VB	1	5	27	67	27	1	•73	2	23	0	28	2	2	2	•93	0	41	2	3	•93	2	0
VD	4	14	34	47	23	7	6	10	•77	0	43	4	13	•78	4	0	72	5	[•69]	(20)	6	0
VF	3	9	16	71	53	3	•90	3	3	0	54	3	8	11	•78	1	55	3	6	4	•86	1
POSITIVE RESPONSE/READING																						
VIA	32	37	23	8	73	38	28	•35	1	1	74	29	22	•47	1	0	75	49	25	•24	1	1
VIB	62	27	9	2	76	46	32	•21	1	0	77	70	16	•13	1	0	78	54	25	•18	1	0
VIC	68	24	6	2	79	75	15	• 9	1	0	80	72	16	•10	1	1	81	46	30	•23	1	0
VID	51	29	17	3	82	67	20	•12	1	0	83	39	29	•30	1	1	84	38	29	•31	2	1
RELATED READING ACTIVITIES					85	30	36	24	9	1	86	25	30	24	22	0	87	51	29	14	7	0

← → ≥25%

▭ < 70% CORRECT

⬭ ≥ 20% INCORRECT

Number of students included in this report: 130042

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Mathematics Grade 7

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	ITEM CORRECT	ITEM CORRECT	ITEM CORRECT	ITEM CORRECT		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
NUMERATION																						
18-1	14	5	11	71	88	•81	15	3	2	0	89	1	3	•72	14	0	90	5	16	3	•77	0
19-2	2	1	5	92	1	1	1	0	•95	2	2	1	•95	1	1	2	3	1	1	•96	1	2
WHOLE NUMBERS																						
25-3	2	6	20	72	91	1	6	•91	1	0	92	2	12	5	•81	0	93	•89	6	2	2	0
26-3	4	12	25	59	118	3	18	•77	2	0	119	3	•81	11	3	0	120	8	•81	7	3	1
32-1	8	9	14	68	163	•80	5	10	4	0	164	3	9	•83	4	0	165	6	7	6	•80	1
32-2	6	8	15	70	154	•83	8	4	4	0	155	•83	6	8	2	1	156	8	4	•83	5	0
39-1	4	6	11	79	142	4	4	•88	4	0	143	•90	4	4	2	0	144	5	•88	5	2	0
39-3	8	10	19	63	145	8	7	•81	4	1	146	•80	7	10	4	0	147	7	11	•77	5	0
44-7	5	10	22	63	94	11	10	•77	3	1	95	6	•83	6	4	1	96	7	6	•83	4	0
45-1	17	8	10	65	148	•75	15	5	5	0	149	•73	8	6	13	0	150	4	•74	7	14	1
DECIMALS																						
63-2	35	15	13	37	139	•46	38	6	9	0	140	14	26	10	•50	1	141	•55	8	24	13	0
68-5	6	12	21	60	130	8	7	9	•76	1	131	7	12	•78	3	0	132	•82	8	7	3	0
69-1	7	10	17	66	160	5	5	14	•76	1	161	6	6	•84	4	0	162	4	5	10	•81	0
FRACTIONS																						
80-2	8	4	9	79	97	•86	3	9	2	0	98	3	5	6	•86	0	99	4	•86	2	7	0
81-3	26	7	10	57	121	20	•66	7	7	1	122	6	11	•64	18	1	123	8	•66	20	5	1
85-3	15	5	7	73	100	1	•79	17	1	1	101	2	5	•78	15	0	102	2	•80	16	2	0
90-3	37	13	13	36	103	•50	18	17	14	1	104	17	19	•50	14	1	105	•48	19	17	15	2
94-2	24	12	10	53	127	17	14	•63	5	1	128	15	•65	14	5	1	129	16	•64	13	6	1
95-3	13	10	14	62	109	•76	14	6	4	1	110	6	•73	•3	7	1	111	•76	6	13	4	0
METRIC MEASUREMENT																						
109-2/3	34	16	17	34	133	12	24	•52	11	1	134	12	•53	23	12	1	135	•46	18	24	11	1
119-2	21	11	9	59	136	2	•72	3	23	0	137	•67	10	21	2	0	138	3	10	•36	20	0
127-1	41	11	10	38	157	2	10	•48	39	0	158	5	8	•48	38	0	159	41	•49	5	5	1
144-1	2	10	33	55	106	1	4	•89	6	0	107	2	•78	1	18	0	108	1	19	6	•74	0
NON-METRIC MEASUREMENT																						
148-3	5	15	29	51	151	8	7	5	•80	0	152	10	•80	8	2	0	153	5	•67	4	24	0
152-2	21	8	13	58	124	•67	9	6	18	0	125	•72	5	5	18	0	126	•70	8	5	17	0
GEOMETRY																						
157-1	2	5	16	76	112	•89	2	7	2	0	113	3	1	7	•89	0	114	2	2	8	•88	0
160-1/2	6	14	50	30	166	3	6	•87	4	0	167	6	7	5	•82	0	168	15	21	•35	29	1
PROBABILITY & STATISTICS																						
170-2	5	11	18	66	115	•81	6	9	3	1	116	•79	12	5	4	0	117	3	•84	10	3	0
FORM A																						
56-3	8	13	19	60	184	•79	9	10	3	0	185	•70	11	9	10	0	186	•81	4	9	5	0
109-4	24	33	17	26	178	18	•43	31	8	1	179	17	11	29	•43	1	180	15	14	10	•59	1
148-5	7	15	28	50	169	•65	26	5	4	0	170	•80	11	5	3	1	171	6	7	•77	10	0
152-2	11	8	14	66	175	9	4	7	•79	1	176	10	5	6	•76	0	177	8	4	•81	6	0
152-3	5	10	25	60	181	5	4	•87	4	0	182	17	8	8	•66	0	183	4	7	•85	4	0
175-1	4	14	30	52	172	2	4	6	•88	0	173	4	5	•77	14	0	174	26	4	•65	4	0
	< ——— →					▭	<	70%	CORRECT													
	= 25%					○	≥	20%	INCORRECT													

21

Number of students included in this report: 129791

22

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Reading Grade 10

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	0 ITEMS CORRECT	1 ITEM CORRECT	2 ITEMS CORRECT	3 ITEMS CORRECT		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
VOCABULARY MEANING																						
IA	6	22	36	36	31	4	•86	4	5	0	32	30	13	•48	9	0	33	14	4	13	•68	0
IC	3	6	15	76	37	8	•88	3	1	0	38	2	8	•87	3	0	39	•90	4	3	3	0
ID	5	12	23	60	34	15	•75	4	5	0	35	•80	2	10	7	0	36	10	3	•82	4	0
IE	3	6	11	80	1	11	1	1	•87	0	2	0	2	•89	8	0	3	1	•91	2	5	0
IF	1	3	12	84	4	1	1	2	•96	0	5	2	2	•95	2	0	6	•87	5	6	2	0
LITERAL COMPREHENSION																						
IIB	3	12	28	57	15	4	5	•86	4	1	40	9	6	•76	8	2	55	3	5	•78	14	1
IIC	3	12	33	51	13	•78	3	5	13	0	47	4	4	•89	4	0	67	•65	24	7	4	0
IIE	4	13	32	51	19	5	6	•82	7	0	29	24	8	6	•62	0	50	3	•87	5	4	1
IIF	6	17	35	43	43	4	5	7	•84	0	58	5	14	•77	3	0	63	18	•54	12	16	0
IIG	3	10	24	63	17	8	4	6	•83	0	42	6	9	6	•78	0	57	4	4	•87	5	0
INFERENTIAL COMPREHENSION																						
IIIA	4	14	31	51	12	5	4	•83	8	0	46	•82	9	4	5	0	66	18	8	•65	8	0
IIIB	3	11	29	57	18	11	•80	5	4	0	28	3	•90	5	2	0	49	3	•69	14	13	0
IIIC	3	9	23	65	23	•81	13	4	2	0	24	3	•85	10	2	0	27	3	8	•85	3	0
IIID	3	11	28	58	16	•89	4	4	3	0	41	6	14	•70	10	0	56	8	•82	6	3	0
IIIE	5	17	38	40	44	4	4	9	•83	0	59	5	11	•62	21	0	61	9	15	•68	8	0
IIIF	5	15	29	51	14	6	2	9	•83	0	48	13	5	6	•75	0	68	•69	9	9	13	1
IIIG	7	17	27	49	45	7	12	•73	7	0	60	•72	13	7	8	0	62	•72	9	12	7	0
IIIH	7	21	33	40	7	•83	2	13	2	0	8	29	5	•52	14	0	9	18	•70	11	1	0
CRITICAL READING SKILLS																						
IVA	3	13	36	47	10	8	5	4	•83	1	25	6	7	•82	4	1	64	•69	15	13	9	1
IVB	7	17	30	46	52	•75	9	13	4	0	53	11	9	•73	7	0	54	15	•68	10	6	0
IVC	3	14	33	50	11	•89	4	4	3	0	26	8	9	7	•76	0	65	10	16	9	•64	1
RELATED STUDY SKILLS																						
VA	5	17	38	41	70	5	10	•79	6	1	71	14	12	•56	17	0	72	•79	11	7	2	0
VB	1	3	13	84	21	1	2	1	•95	0	22	•95	2	3	1	0	69	4	•91	3	2	0
VD	5	15	30	50	20	7	•80	8	5	1	30	7	9	•79	5	0	51	9	18	•66	7	0
POSITIVE RESPONSE/READING																						
VIA	38	31	22	9	73	49	25	•25	1	0	74	28	22	•49	1	0	75	48	23	•28	1	0
VIB	75	20	4	1	76	87	21	•11	1	0	77	80	13	•6	0	0	78	57	28	•14	1	0
VIC	78	18	4	1	79	83	11	•5	1	0	80	81	12	•6	1	0	81	52	30	•17	1	0
VID	54	25	18	4	82	70	20	•10	1	0	83	41	30	•28	1	0	84	34	31	•34	1	0
RELATED READING ACTIVITIES					85	29	32	28	10	0	86	34	30	23	13	0	87	51	30	13	5	0

← → ≥25%

[ ] < 70% CORRECT

( ) ≥ 20% INCORRECT

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Number of students included in this report: 129585

24

Michigan Educational Assessment Program 1981-1982

meap

STATE TEST ITEM ANALYSIS

Mathematics Grade 10

OBJECTIVE CODE	Percent of Students Answering				ITEM	Percent Choosing					ITEM	Percent Choosing					ITEM	Percent Choosing				
	ITEM	ITEM	3 ITEMS	3 ITEMS		A	B	C	D	OMIT		A	B	C	D	OMIT		A	B	C	D	OMIT
WHOLE NUMBERS																						
46-5	4	7	20	69	109	5	13	•77	4	1	110	•90	5	3	2	1	111	4	5	4	•87	0
47-2	5	7	16	72	112	2	11	5	•82	0	113	4	•87	4	5	0	114	4	8	•85	3	0
DECIMALS																						
66-2	5	14	28	53	94	2	11	•86	1	0	95	2	9	•87	2	0	96	18	•57	4	21	0
67-1	11	17	27	46	166	7	25	•60	7	0	167	5	•77	10	8	0	168	11	8	9	•71	0
74-7	7	13	21	59	118	4	5	•79	12	0	119	9	•76	6	8	1	120	9	•77	7	6	1
75-3	7	10	15	69	130	5	6	•85	4	1	131	•83	7	6	3	0	132	8	5	8	•78	0
77-2	10	10	19	60	142	3	7	•79	12	0	143	3	•80	6	11	0	144	6	15	•71	7	0
77-3	12	22	31	35	121	15	•60	5	20	0	122	3	17	7	•73	0	123	8	18	16	•58	1
FRACTIONS																						
82-2	9	9	15	67	115	22	•74	2	1	2	116	•80	18	1	1	0	117	13	•85	2	1	0
83-3	12	6	4	79	154	5	4	8	•83	0	155	4	8	4	•83	0	156	8	5	•84	4	0
87-3	32	7	5	56	145	5	•61	27	6	1	146	6	•62	5	27	0	147	5	•62	28	4	0
88-2	26	12	12	50	163	3	13	23	•61	0	164	4	•61	13	22	0	165	3	14	•64	19	1
92-4	14	7	11	67	106	2	•74	11	13	0	107	9	11	3	•77	0	108	•80	8	9	2	0
92-6	16	17	13	54	133	14	•76	4	6	0	134	13	5	17	•64	1	135	17	6	12	•65	1
97-2	5	5	12	78	127	4	8	6	•83	0	128	2	3	•91	3	0	129	4	3	4	•89	0
97-5	44	13	8	35	151	8	6	42	•44	0	152	5	47	•45	3	0	153	39	10	•45	6	0
RATIO, PROPORTION & PERCENT																						
105-4	5	18	30	48	88	14	4	•81	1	0	89	21	•67	8	4	0	90	2	12	14	•72	0
106-1	12	19	26	42	148	6	•61	11	22	1	149	6	16	•75	3	1	150	•62	18	15	5	1
METRIC MEASUREMENT																						
124-2	15	28	22	35	169	17	21	•56	5	1	170	12	12	•61	14	1	171	10	14	•61	15	1
130-1	15	8	8	70	97	15	5	•76	4	0	98	3	15	•80	2	0	99	15	•77	5	3	0
NON-METRIC MEASUREMENT																						
146-1	15	15	14	55	160	17	•68	11	3	1	161	•72	14	10	3	0	162	•69	14	12	4	0
149-1	3	7	15	74	103	2	3	4	•91	0	104	•86	3	8	2	0	105	4	•84	6	5	1
154-2	12	14	20	54	157	10	•77	5	8	0	158	•69	12	9	11	0	159	•70	13	6	10	0
GEOMETRY																						
167-2	12	18	18	52	100	23	•69	6	2	1	101	•73	19	5	3	0	102	6	12	13	•68	0
PROBABILITY & STATISTICS																						
172-1	6	15	21	58	139	4	•80	5	11	0	140	13	•72	9	5	1	141	4	11	6	•78	0
173-1	7	13	20	60	124	5	7	•83	4	1	125	7	•73	13	6	1	126	5	9	•78	9	0
EQUATIONS, EXPRESSIONS GRAPHS																						
180-7	7	15	21	57	136	14	•78	3	5	0	137	3	19	•73	6	0	138	8	6	•78	7	0
182-5	1	1	5	93	91	•97	1	1	1	0	92	•96	1	2	0	0	93	1	•97	2	0	0
FORM A																						
73-2	28	15	16	41	190	6	•57	15	22	0	191	22	15	•58	5	0	192	7	•55	18	21	0
74-1	21	16	22	42	187	14	10	•63	14	0	188	•64	12	10	15	0	189	19	11	12	•58	0
74-3	5	9	15	71	184	4	7	•85	2	0	185	5	•81	10	3	1	186	5	•85	6	3	0
74-4	10	8	23	59	181	9	4	4	•83	0	182	•83	9	5	3	0	183	2	•65	30	2	0
77-1	16	13	15	56	178	9	12	12	•66	1	179	8	•74	13	4	0	180	10	10	•71	9	1
77-2	6	10	22	62	175	5	5	•81	8	1	176	11	•72	8	8	0	177	4	6	•86	4	0
153-1	5	9	16	69	172	2	8	7	•82	0	173	2	5	10	•82	0	174	6	•85	5	3	0

≥ 75%

□ < 70% CORRECT

○ ≥ 20% INCORRECT

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Number of students included in this report: 128971

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